From: "Erath Alexander" <alexander.erath@ivt.baug.ethz.ch>
Subject: **[news] Several PhD/Postdoctoral positions in Mobility and Transport Engineering/Simulation at ETH's Future Cities Laboratory Singapore**
Date: 29 September 2010 13:14:36 CEST
To: "news@lists.ivt.ethz.ch" <news@lists.ivt.ethz.ch>

Dear Colleagues,

The Future Cities Laboratory (FCL) is the first research programme of the Singapore ETH Centre for Global Environmental Sustainability (SEC), a joint effort between ETH Zurich and the Singapore National Research Foundation (NRF). The FCL programme will undertake cutting-edge research in disciplines ranging from material science, engineering and environmental technologies to communications technology and architecture and work in close collaboration with Singapore's universities and the MIT Singapore Future Urban Mobility research group. The FCL aims to research and develop solutions and guidelines directed towards the sustainable development of buildings, districts and regions.

Within the FCL and as part of the ETH Zurich's IVT (Institute of Transport Planning and Systems), the research group on mobility and transport engineering and planning aims to advance research into the complexity of managing, planning and optimising the flow of people and goods at different time scales and in its interaction with all elements of the future city. Through the further development of activity based transport modeling and simulation, the project focuses on providing solutions for medium and long term transport problems. The software system MATSim (www.matsim.org) will be used as key modeling and simulation component and also be subject of further development. The research group will be composed of a number of doctoral students, headed by Prof. Axhausen and two senior researchers.

PhD Positions in Transport Modeling

You will work on the further development of activity based transport modeling. Depending on your profile and interests you will either be focusing on transport related choice modeling or the influence of social network on transport. You will conduct your own surveys and engage in the scientific community through participation in conferences and journal publications.

We are looking for highly motivated candidates holding a master degree in a relevant discipline: transport engineering and planning, urban planning or social science - all with strong quantitative background. We require experience in one or several of the following fields: travel behavior modeling, econometrics, discrete choice modeling, spatial data analysis, survey design. Additionally, we require basic programming skills, e.g. Java or script languages such as Python.

PhD Positions in Transport Simulation

You will work on the further development of activity based transport simulation. Depending on your profile and interests you will either be focusing on the implementation and optimisation of transport management systems or on the integration of multi-day planning and new service provider agents in a transport simulation framework. You will engage in the scientific community through participation in conferences and journal publications.

We are looking for highly motivated candidates holding a master degree in a relevant discipline: computer science, mathematics, physics, industrial engineering – all with a focus on applied problems and an interest in mobility and transport modeling. We require programming skills in an object orientated language, preferably with experience in one or several of the following disciplines: implementation of complex algorithms, optimisation, computer simulation, software design and development, handling of large scale datasets. In addition, you are interested or experienced in applied mathematics for transport management and/or applied optimisation and complex systems.

Postdoctoral Position:

Your tasks will be to guide and advise the PhD students but also to conduct your own research within the field of activity based transport modeling and simulation. In addition, you will collaborate and exchange with external project partners.

You are holding a PhD in a relevant discipline: transport engineering and planning - with strong

quantitative background - or computer science, mathematics, physics, industrial engineering - with a focus on transport modeling. You have a good capacity for teamwork, creative problem solving and good communications skills. You should be fluent in both spoken and written English (additional languages are a plus) and have a publication record in relevant peer-reviewed journals. Furthermore, programming skills in an object oriented language (preferably Java) and a scripting language (Python) are required.

Based in Singapore, all posts are provided with a competitive salary and the potential of spending longer research visits in Switzerland. The project duration is set to five years and the PhD appointments are expected to last 3 to 3.5 years. The position will be available from Jan/Feb 2011 (negotiable) or on mutual agreement. We look forward to receiving your application by October 31, 2010. Please submit your application together with curriculum vitae, contact information and at least one reference using ETH Zurich's job vacancies platform at:

PhD Positions in Transport Modeling:
http://internet5.refline.ch/845721/1193/++publications++/1/index.html

PhD Positions in Transport Simulation:
http://internet5.refline.ch/845721/1194/++publications++/1/index.html

Postdoctoral Position:
http://internet5.refline.ch/845721/1195/++publications++/1/index.html.

Kind regards,
Kay Axhausen

Prof. K.W. Axhausen
IVT
ETH
CH - 8093 Zürich

axhausen@ivt.baug.ethz.ch
www.ivt.ethz.ch

(T) +41-44-633 3943
(F) +41-44-633 1057

Office: Hönggerberg, HIL, F 32.3